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A DESCRIPTION OF NEONATES OF MERRIAM'S POCKET GOPHER  
(*PAPPAGEOMYS MERRIAMI MERRIAMI*)

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Biological information about Merriam's pocket gopher (*Pappogeomys merriami merriami*) is limited, despite it being considered a major agricultural pest species in the Central Mexican Highlands. Although some information is available in the literature concerning the reproductive characteristics of the species (e.g., Perusquia and Villa-C., 1982; Villa-C. and Engeman, 1994), no description of neonates has been published for *P. m. merriami*. In contrast, there are descriptions of neonates from other pocket gopher species (e.g., Anthony, 1923; Hill, 1934; Schramm, 1961; Wight, 1918; Wood, 1955; Sudman et al., 1986; Barrington, 1942). Merriam's pocket gopher has received little research attention, possibly because it is difficult to live-trap and maintain the species in captivity. We describe the external morphology of two sibling neonates of *P. m. merriami* born following the capture of their mother as part of a research project in Chalco, México in 1990.

The mother, captured on 20 May 1990, bore no external evidence of her pregnancy, but gave birth to two offspring (mean litter size = 1.5;

Villa-C. and Engeman, 1994) during the night of 24 May 1990. These neonates survived only a few hours. Measurements (mm) of both specimens were: total length (60.0, 70.0); hind foot length (7.5, 8.5); tail length (10, 10); crown-rump length (41.0, 46.5); head length (17.5, 19.5); upper arm length (10.6, 12.6); and thigh length (9.0, 8.0). Their respective weights were 11.7 and 12.6 g. The skin of the neonates was soft, almost pigmentless, and loose; hair was absent except for the presence of vibrissae, as is typical of newborn rodents (Pocock, 1914). The mystacials were numerous, thick, and long, while the submentals were few and fine. Genals were present, forming a line between the eye and the ear. The rostrum was relatively wider than for adults; the lips were thin and delicate, and the teeth unerupted. The eyes were relatively larger than in adults and could be seen through the skin that covered them. The pinnae were poorly developed and the auditory orifices were closed. The cheek pouches were deeply delineated around the mouth. Only the distal segments of the forelimbs extended be-

TABLE 1—Comparison of weight and total length of neonate pocket pocket gophers reported in the literature: C = captive-born; B = from burrows.

Taxon	Captive or burrow	Weight (g)	Length (mm)	Reference
<i>Thomomys bottae</i>	B	4.0-4.2	49.5-50.5	Hill (1934)
<i>Thomomys bulbivorous</i>	C	6.12	50	Wight (1918)
<i>Geomys breviceps</i>	B	4.3	49	Wood (1955)
<i>Geomys bursarius</i>	C	5.0	46	Sudman et al. (1986)
	C	5.5	50	Sudman et al. (1986)
<i>Geomys floridanus</i>	C	5.2-6.5	50-52	Barrington (1942)
<i>Pappogeomys merriami</i>	C	11.7-12.6	60-70	this study

yond the general body form and skin, as in *Thomomys bottae* (Hill, 1934). Partially formed digits and claws were visible along the leading edge of the forefoot. The middle finger was axial as in *T. bottae* (Hill, 1934). The form of the body was cylindrical and resembled that of the adult in general fusiform shape, lacking a noticeable cervical constriction. The tail was rounded and not constricted at the base as in neonates of *T. bottae* (Hill, 1934). The posterior extremities were shorter than the anterior ones, with only the distal segment of the pes seeming to extend from the general cylindrical body form. The digits of the pes were extremely short with relatively long claws; digits and claws of the pes were shorter than those of the manus.

Neonate *P. m. merriami* average between 27% and 41% longer than those of other geomyids described in the literature (Table 1), and are proportionally heavier: observed weight differences (approximately 200% to 300%) are close to those predicted by the cube of length differences (205% to 280%). Larger neonate sizes are reflected in adult sizes: adult *P. m. merriami* can weigh in excess of 1300 g (pers. obs.), whereas adults of the other geomyid species weigh less than 600 g (Nowak and Paradiso, 1983).

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